COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Wellborn Cabinet, Inc. – Plant 2
357 Bear Creek Road, Atkins, Virginia
Permit No. SWRO10424

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Wellborn Cabinet, Inc. has applied for a Title V Operating Permit for its Atkins, Virginia – Plant 2 facility. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact:_____ Date:_____

Air Permit Manager:_____ Date:_____

Regional Director:_____ Date:_____

FACILITY INFORMATION

Permittee
Wellborn Cabinet, Inc.
P.O. Box 1210
Ashland, Alabama 36251

Facility
Wellborn Cabinet, Inc. – Plant 2
357 Bear Creek Road
Atkins, Virginia

County-Plant Identification Number: 51-173-00035

SOURCE DESCRIPTION

NAICS Code: 337122 - Nonupholstered Wood Household Furniture Manufacturing

The company manufactures wood furniture items. The processes include boilers, lumber drying, woodworking, assembly, and finishing.

The facility is a Title V major source of particulate matter emissions. The facility has been a major source of volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions, and is subject to MACT JJ – National Emissions Standards for Hazardous Air Pollutants for Wood Furniture Manufacturing Operations. The current HAP emissions potential is below major thresholds, but there is a possibility that finishing operations could resume in the future. The kilns are affected sources subject to MACT DDDD - National Emissions Standards for Hazardous Air Pollutants for Plywood and Composite Wood Products. This source is located in an attainment area for all pollutants, and is considered minor with respect to PSD regulations. The facility is currently permitted under a Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007).

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was conducted on July 16, 2007. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
ES-1		Bigelow Model 3090 wood-fired boiler - 1954	29.0 million Btu/hr	Zurn multicyclone	CD-1	PM	12/15/04
ES-2		Hurst Model S65-X-384-150 wood-fired boiler - 1999	20.2 million Btu/hr	Zurn multicyclone	CD-18	PM	12/15/04
Lumber Dry Kilns							
ES-4		4 Lumber Dry Kilns	55,000 Bd-ft/2 weeks, each	----	----	----	
ES-6		1 SII Lumber Dry Kiln (#13) – August, 2004	110,000 Bd-ft/2 weeks	----	----	----	----
ES-8 & ES-9		2 SII Lumber Dry Kiln – May, 2007	50,000 Bd-ft/2 weeks, each	----	----	----	----
Gluing Operations							
ES-7		Veneer Cold Presses; Radio Frequency Presses Glue Reels		----	----	----	----
Finishing Operations							
SB-12		1 spray booth	Various	filters	----	PM	12/15/04

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Woodworking							
ES-5		Various saws, sanders, shapers, etc.	-	Three Carter Day baghouses	CD-3 - CD-5	PM	12/15/04

EMISSIONS INVENTORY

Emissions are summarized in the following tables:

2006 Actual Emissions

	2006 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
ES-1	0.21	4.1	0.17	0.49	3.33
ES-2	0.13	7.3	0.30	0.87	5.93
SB-12	19.34			0.004	
ES-5				0.37	
ES-4 & ES-6	0.86				
ES-8 & ES-9	---	---	---	---	---
Total	20.54	11.4	0.47	1.72	9.26

2006 Facility Hazardous Air Pollutant Emissions

Pollutant	2006 Hazardous Air Pollutant Emission in Tons/Yr
HCL	0.36

EMISSION UNIT APPLICABLE REQUIREMENTS - Bigelow Boiler (ES-1)

Limitations

The following limitations are requirements from Conditions 3, 7, 18, and 23 of the Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007):

Condition 3 requires that particulate emissions from the boiler be controlled by a multicyclone.

Condition 7 limits the approved fuel to wood.

Condition 18 requires the company to keep records of tons of wood combusted in the boiler on a monthly and annual basis.

Condition 23 requires that excess emissions from boilers and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80 and 290, New Source Standard for Visible Emissions - The unit was installed in 1977 according to file information. The unit was reportedly constructed in 1954. The opacity requirement is 20%, except for one 6-minute period within one hour not to exceed 30%.

The unit is subject to emission standards outlined in 9 VAC 5-40, Article 8 in the absence of any standards from Chapter 50 of State Regulations.

9 VAC 5-40-900, Standard for Particulate Matter (PM) - Since the boiler was installed prior to 1979, by definition, it is considered a fuel burning equipment installation. According to 9 VAC 5-40-900 A.1.b, the unit may not emit more particulate matter than can be calculated by the formula:

$$E = 1.0906\ H^{-0.2594}$$

where E is particulate emissions in lb/MMBtu and H is the heat rating of the unit (29.0 MMBtu/hr). The resulting particulate matter emission standard is,

$$E = 1.0906(29.0)^{-0.2594}\ \text{lb/MMBtu} = 0.46\ \text{lb/MMBtu}$$

9 VAC 5-40-930, Standard for Sulfur Dioxide - Sulfur dioxide emissions are limited according to the formula:

$S = 2.64\ K$ where, S is lb/hr of SO_2, and
K is the heat capacity of the unit (MMBtu/hr).

$(2.64)(29.0) = 76.6$ lb/hr SO_2

9 VAC 5-60-100, Subpart DDDDD- Industrial, Commercial, and Institutional Boilers and Process Heaters – This regulation was vacated by the US Circuit Court of Appeals on July 30, 2007. At the present time, no applicable requirements have been identified through §112(j) of the Clean Air Act.

Monitoring

The monitoring and recordkeeping requirements in Condition 18 of the NSR permit have been modified to meet Part 70 requirements.

Compliance with the emission limits can be demonstrated by computations involving acceptable emission factors as shown below:

$E = F \times H$ where

E = Emission rate (lb/time period)
F = Emission factors from AP-42, Section 1.6 (09/03), SCC 1-02-009-08 shown below
PM = 0.317 lb/MMBtu (accounting for control by multicyclone and condensable PM)
SO_2 = 0.025 lb/MMBtu
H = Input Heat Capacity of the unit (MMBtu/hr)

The calculated emission rates can be compared to the maximum allowable emission rates given by:

PM	(0.46 lb/MMBtu)(29.0 MMBtu/hr) = 13.3 lb/hr
SO_2	76.6 lb/hr

Compliance will be confirmed if the calculated emission rate is less than the maximum allowable emission rate. Using a conservative heating value of 6,000 Btu/lb of dry woodwaste, maximum expected emissions are:

PM	$(29.0 \times 10^6$ Btu/hr)(0.317 lb/MMBtu) = 9.19 lb/hr
SO_2	$(29.0 \times 10^6$ Btu/hr)(0.025 lb/MMBtu) = 0.73 lb/hr

Therefore, as long as the boiler is operated properly, compliance with the emission standards is expected. Violation of the particulate matter emission standard would be unlikely under normal operating conditions. Compliance has traditionally been determined using opacity as an indicator of particulate matter emissions. Compliance with the particulate matter standard may be determined by periodic visible emissions checks on the boiler exhausts as explained below, and annual multicyclone inspections. Compliance with the SO_2 emission standard will be insured by virtue of the low sulfur content of typical woodwaste. No other monitoring will be required.

The permit contains a requirement to perform weekly visible emission observations on the boiler stack. If visible emissions are present at a level above 10% opacity, a six-minute visible emission evaluation (VEE) must be performed according to 40 CFR 60, Appendix A, Method 9. If during the six-minute period, the average opacity exceeds 20%, the company must then take corrective action. If corrective action fails to produce opacity less than 20%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The boiler is equipped with a multicyclone for particulate matter control. Such control devices, if properly operated and maintained, will help ensure compliance with the opacity and particulate matter requirements. The permit requires that the multicyclones be equipped with devices for the continuous measurement of pressure drop, which will also aid in ensuring that the control devices are operated properly. An annual multicyclone inspection will be required to insure structural integrity.

Compliance Assurance Monitoring (CAM) Applicability

The company did not identify this unit as being subject to CAM requirements. The company ruled out this possibility on the basis that since the unit is an affected source subject to MACT DDDDD, it is excluded from further regulation under CAM. According to 40 CFR 64.2(b)(1)(i), units subject to standards proposed after November 15, 1992 pursuant to sections 111 and 112 of the Clean Air Act are exempt from CAM requirements.

Because MACT DDDDD was vacated on July 30, 2007 by the US Circuit Court of Appeals, there is some question as to whether this exemption now applies. Whether this exemption applies or not, the unit may be assessed to determine if the potential pre-controlled regulated air pollutant (PM10) emissions are of a major quantity. Using Table 1.6-1 of AP42 (9/03), the PM10 emission factor for a unit burning dry wood with no control is 0.36 lb/MMBtu. Therefore,

PM10 (29 MMBtu/hr)(0.36 lb/MMBtu)(8760 hr/yr)(1 T/2000 lb) = 45.7 T/yr

Because potential (pre-controlled) PM10 emissions are less than 100 T/yr, the unit is not subject to CAM.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include tons of wood combusted in the boiler, records of visible emissions evaluations, a list of approved emission factors for the unit, emission estimates using those factors, and annual multicyclone inspection results.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for the boiler.

Streamlined Requirements

The company did not propose any specific streamlining regarding the boiler.

EMISSION UNIT APPLICABLE REQUIREMENTS – Hurst Boiler (ES-2)

Limitations

The following limitations are requirements from Conditions 3, 7, 8, 10, 13, 17, 18, and 23 of the Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007):

Condition 3 requires that particulate emissions from the boiler be controlled by a multicyclone.

Condition 7 limits the approved fuel to wood.

Condition 8 limits the wood consumed in the boiler to 10,345 tons/yr, calculated as the sum of each consecutive 12-month period.

Condition 10 limits emissions from the boiler to the following:

POLLUTANT	EMISSION LIMIT	
	lb/MMBtu	T/yr
Particulate Matter/PM10	0.3	6.8
Carbon Monoxide		70.3
Sulfur Dioxide		0.8

POLLUTANT	EMISSION LIMIT	
	lb/MMBtu	T/yr
Nitrogen Oxides (as NO_2)		7.8
Volatile Organic Compounds		1.1

Condition 13 limits opacity from the boiler to 20%, except for one 6-minute period not to exceed 27%.

Condition 17 requires that the boiler be operated in compliance with 40 CFR 60, Subpart Dc pertaining to small boilers.

Condition 18 requires the company to keep records of tons of wood combusted in the boiler on a monthly and annual basis.

Condition 23 requires that excess emissions from boilers and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-80 and 290, New Source Standard for Visible Emissions - The unit was installed in 1999 according to file information. The opacity requirement is 20%, except for one 6-minute period within one hour not to exceed 30%.

9 VAC 5-50-260, Standard for Stationary Sources – Best Available Control Technology – This applies to this unit. This boiler has been permitted under the minor NSR program, and state BACT measures have been applied.

40 CFR 60.40c-48c, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, applies to the unit.

9 VAC 5-60-100, Subpart DDDDD- Industrial, Commercial, and Institutional Boilers and Process Heaters – This regulation was vacated by the US Circuit Court of Appeals on July 30, 2007. At the present time, no applicable requirements have been identified through §112(j) of the Clean Air Act.

Monitoring

The monitoring and recordkeeping requirements in Condition 18 of the NSR permit have been modified to meet Part 70 requirements.

Compliance with the emission limits can be demonstrated by computations involving acceptable emission factors as shown below:

$E = F \times W$ where

E = Emission rate (lb/time period)
F = Emission factors from AP-42, Section 1.6 (10/96), SCC 1-02-009-06 shown below
  PM = 1.3 lb/T of woodwaste (accounting for 85% control by multicyclone)
  PM10 = 1.3 lb/T of woodwaste (accounting for 85% control by multicyclone)
  SO_2 = 0.15 lb/T of woodwaste
  CO = 13.6 lb/T of woodwaste
  NO_x = 1.5 lb/T of woodwaste
  VOC = 0.22 lb/T of woodwaste
W = Wood combusted (T/time period)

Compliance will be confirmed as long as the calculated emission rates are less than the permitted emission rates. The permitted emission limits were established using the above emission factors and the fuel consumption limit. As long as the wood consumed does not exceed the permitted limit of 10,345 tons per year, the emission rate should not exceed the permitted emission rate. Therefore, compliance will be determined by monitoring records of wood combustion and insuring that the boiler is maintained and operated properly. Opacity will be a primary indicator of proper operation. Compliance with the emission limits should be further warranted by the exclusive combustion of woodwaste as fuel.

Compliance with the particulate emission limit of 0.3 lb/MMBtu may be shown using a conservative heat content of 6,000 Btu/lb of dry woodwaste:

PM/PM10 (20.2 MMBtu/hr)(0.3 lb/MMBtu) = 6.1 lb/hr (allowable)
(20.2 MMBtu/hr)(1 lb/6000 Btu)(1 T/2000 lb)(1.3 lb/T) = 2.2 lb/hr (predicted)

Since the potential emissions using the emission factor are smaller, compliance is predicted. The emission factors represent a typical properly operated unit. Records of weekly opacity observations will show that the unit is operating properly, and should meet periodic monitoring requirements for the boiler. Violation of the particulate matter emission standard would be unlikely under normal operating conditions. As long as the boiler is operated properly, compliance with the emission limit is expected.

The permit contains a requirement to perform weekly visible emission observations on the boiler stack. If visible emissions are present at a level above 10% opacity, a six-minute visible emission evaluation (VEE) must be performed according to 40 CFR 60, Appendix A, Method 9. If during the six-minute period, the average opacity exceeds 20%, the company must then take corrective action. If corrective action fails to produce opacity less than 20%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The boiler has been equipped with a multicyclone for particulate matter control. Such control devices, if properly operated and maintained, will help to insure compliance with the opacity

requirements. The permit requires that the multicyclone be equipped with devices for the continuous measurement of pressure drop, which will also aid in insuring that the control device is operated properly. An annual multicyclone inspection will be required to insure structural integrity and proper operation.

Compliance Assurance Monitoring

The company did not identify this unit as being subject to CAM requirements. The company ruled out this possibility on the basis that since the unit is an affected source subject to MACT DDDDD, it is excluded from further regulation under CAM. According to 40 CFR 64.2(b)(1)(i), units subject to standards proposed after November 15, 1992 pursuant to sections 111 and 112 of the Clean Air Act are exempt from CAM requirements.

Because MACT DDDDD was vacated on July 30, 2007 by the US Circuit Court of Appeals, there is some question as to whether this exemption now applies. Whether this exemption applies or not, the unit may be assessed to determine if the potential pre-controlled regulated air pollutant (PM10) emissions are of a major quantity. Using the abovementioned emission factors, the potential pre-controlled PM10 emissions are predicted to be:

PM10 (20.2 MMBtu/hr)(1 lb/6000 Btu)(1 T/2000 lb)[(1.3 lb/T)/(1-0.85)](8760 hr/yr)(1 T/2000 lb) = 63.9 T/yr

Because potential (pre-controlled) PM10 emissions are less than 100 T/yr, the unit is not subject to CAM.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include monthly and annual wood combustion rates, results of weekly visible emission evaluations and annual inspections, a list of approved emission factors for the unit, and emission estimates using those factors.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for the boiler.

Streamlined Requirements

The minor NSR permit established opacity limits more stringent than those required by 9 VAC 5-

50-80, in that one 6-minute period in any one hour cannot exceed 27%. This is slightly more stringent than the 30% opacity allowed in 9 VAC 5-50-80. Therefore, the requirement is appropriate for streamlining.

EMISSION UNIT APPLICABLE REQUIREMENTS - Lumber Dry Kilns (ES-4, ES-6, ES-8, & ES-9)

The plant includes seven lumber dry kilns. Two SII kilns capable of drying 50,000 bd-ft per 2-week period each were installed in May, 2007. Four kilns are each capable of drying 55,000 bd-ft per 2-weeks, and one SII dry kiln is capable of drying 110,000 bd-ft per 2-weeks. These units are registered, having no permit restrictions.

On October 26, 2004, the company obtained a minor new source review permit to install and operate three new SII lumber dry kilns. However, none of the units were installed The October 26, 2004 permit was superseded by a December 15, 2004 (as amended February 5, 2007 and March 12, 2007) permit. More than 18 months have passed since the SII kilns were permitted. Therefore, the minor NSR permit conditions related to these units were removed and will not be included in the Title V permit.

Limitations

The following limitations are requirements from Condition 23 of the Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007):

> Condition 23 requires that excess emissions from process and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training must also be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-60-100– National Emissions Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR 63, Subpart DDDD) applies to lumber dry kilns at major sources of HAP emissions. However, only initial notification requirements apply.

Monitoring

The monitoring and recordkeeping requirements in Condition 18 of the NSR permit have been modified to meet Part 70 requirements.

These units are not considered sources of visible emissions, therefore, no opacity standards apply, and no observations are required.

Monthly and annual lumber throughput must be monitored. VOC emissions will be calculated using approved emission factors (below) for hardwood and softwood.

VOC (hardwood) = 0.34 lb/1000 Bd-ft VOC (softwood) = 3.4 lb/1000 Bd-ft

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include monthly and annual lumber throughput and VOC emissions, and a record of the initial notification for compliance with MACT DDDD.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for this operation.

Streamlined Requirements

No streamlining is proposed for this operation.

EMISSION UNIT APPLICABLE REQUIREMENTS – Gluing Operations (ES-7)

Limitations

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-60-100– National Emissions Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products (40 CFR 63, Subpart DDDD) applies to gluing solid wood pieces together to form what EPA considers an “engineered wood product.” In a July 13, 2005 letter from EPA to the American Home Furnishings Alliance, EPA determined that using glue to assemble solid wood components constitutes an “engineered wood product” and is subject to this regulation. However, no specific requirements apply. Compliance is demonstrated through identifying the operation as subject to the regulation in the Initial Notification (already submitted).

Monitoring and Recordkeeping

There are no applicable requirements to monitor for compliance with Subpart DDDD. However,

the gluing operation may contribute to the facility-wide VOC emissions. Therefore, the company is required to maintain records of glue consumption and MSDS information for each glue product used.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for this operation.

Streamlined Requirements

The company did not propose any specific streamlining regarding the gluing operation.

EMISSION UNIT APPLICABLE REQUIREMENTS - Finishing Operations (SB-12)

Limitations

The following limitations are requirements from Conditions 6, 9, 12, 16, 18, and 23 of the Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007):

Condition 6 requires that spray booth SB-12 be equipped with filters for particulate control.
Condition 9 limits the throughput of Woodsize Concentrate at spray booth SB-12 to 19,607 gallons per year.

Condition 12 limits emissions from spray booth SB-12 to:

POLLUTANT	EMISSION LIMIT	
	Lb/hr	T/yr
Particulate Matter/PM10	0.7	1.7
Volatile Organic Compounds	0.2	0.5

Condition 16 limits opacity from spray booth SB-12 to 5%.

Condition 18 requires that the company keep records of all adhesive materials used on a

monthly and annual basis, MSDS information, and annual VOC emissions estimates.

Condition 23 requires that excess emissions from process and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:
9 VAC 5-60-100, EPA National Emission Standards for Hazardous Air Pollutants for Source Categories - Wood Furniture Manufacturing Operations - 40 CFR 63.800 - 819. The company has complied with these requirements in the past by using compliant coatings. The adhesive material applied in SB-12 is not subject to the MACT, but the company anticipates possible installation of future coating equipment/operations that will have to comply with MACT requirements.

9 VAC 5-50-260, Standard for Stationary Sources – Best Available Control Technology – This applies to spray booth SB-12. This booth has been permitted under the minor NSR program, and state BACT measures have been applied.

Monitoring

The monitoring and recordkeeping requirements in Condition 18 of the NSR permit have been modified to meet Part 70 requirements. The monitoring requirements of the Wood Furniture Manufacturing MACT are included in the permit. These provisions meet periodic monitoring requirements.

Spray booth SB-12 is controlled by filters resulting in a PM10 control efficiency of 85%. Calculations of PM10 emissions will reflect these figures. This booth may only spray one material and compliance with the PM10 emission limit should be more convenient to determine based on monthly usage figures and hours of operation. Compliance with the VOC emission limit may be likewise demonstrated by not exceeding the adhesive material throughput limitations. The company will calculate hourly and annual VOC emissions based on VOC content and material consumption. Hourly emissions will be estimated by monthly emissions divided by hours of operation.

Weekly checks on visible emissions are required by the permit. If visible emissions are observed, the company will conduct a six-minute visible emissions evaluation (VEE) using 40 CFR 60, Appendix A, Method 9. If during the six minutes, the average opacity reading exceeds 5%, the company must take corrective action. If corrective action fails to produce opacity less than 5%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

Compliance Assurance Monitoring

The company reports that this finishing booth is not subject to CAM because it is subject to MACT JJ requirements proposed after November 15, 1992, and exempt from CAM by 40 CFR 64.2(b)(1)(i). Even if this exemption did not apply to the spray booth, the calculations below show that pre-controlled regulated air pollutant (PM10) emissions are below Title V significance levels:

PM10 (19,607 gal/yr)(1.06 SG)(8.345 lb/gal)(0.268 solids)(0.5 transfer efficiency)
(1 T/2000 lb) = 11.6 T/yr

Because potential (pre-controlled) PM10 emissions are less than 100 T/yr, the unit is not subject to CAM.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include results of visible emissions checks and emission calculations.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for this operation. Wood Furniture MACT requirements are included in the Title V permit, and include compliance certification submittals and semiannual reports to establish compliance. Although these requirements do not apply to the application of vinyl acetate adhesive, they do apply to any active coating operations at the facility. If no coating activities occur, the reports and submittals are still required.

Streamlined Requirements

The company did not propose any specific streamlining regarding the finishing operation.

EMISSION UNIT APPLICABLE REQUIREMENTS - Woodworking Operations (ES-5)

Limitations

The following limitations are requirements from Conditions 4, 5, 11, 14, 15, and 23 of the Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007):

Condition 4 requires that particulate matter (PM) emissions from the woodworking equipment be controlled by fabric filters.

Condition 5 requires that material transferred from the fabric filters be controlled by fabric filters or an enclosed transfer system.

Condition 11 limits emissions from the woodworking equipment to 0.01 gr/dscf and 94.6 T/yr of PM and PM10.

Condition 14 limits visible emissions from the fabric filters to 5% opacity.

Condition 15 limits visible emissions from fugitive sources to 10% opacity.
Condition 23 requires that excess emissions from process and air pollution control equipment be minimized by proper operation and maintenance, and that the company is to have written operating procedures for control equipment. Training is also to be offered and recorded for equipment operators.

The following Virginia Administrative Codes that have specific emission requirements have been determined to be applicable:

9 VAC 5-50-260, Standard for Stationary Sources – Best Available Control Technology – This applies to the woodworking emissions. The minor NSR program has required fabric filter control, and state BACT emission limits were established.

9 VAC 5-40-80 - 90, Standard for Visible Emissions and Standard for Fugitive Dust/Emissions - 20% opacity except for one 6-minute period not to exceed 60%. This requirement applies to all existing woodworking equipment. Reasonable precautions are necessary to prevent fugitive dust.

9 VAC 5-50-80 - 90, New Source Standard for Visible Emissions and Standard for Fugitive Dust/Emissions– Some woodworking equipment was installed after 1972. The opacity requirement is 20%, except for one 6-minute period within one hour not to exceed 30%. Reasonable precautions are necessary to prevent fugitive dust.

Monitoring

The monitoring and recordkeeping requirements in Condition 18 of the NSR permit have been modified to meet Part 70 requirements.

The woodworking equipment in operation is required to meet a particulate emission limitation of 0.01 gr/dscf of exhaust gas. The operations are also required to meet a 94.6 T/yr PM/PM10 emission limitation. The annual limitation is based on 0.01 gr/dscf of exhaust gas at continuous operation. As long as the PM emissions are vented through a properly operating control device, the standard is readily attained. PM emissions are vented through baghouses that are reportedly capable of achieving 99.9% control. Therefore, as long as the control devices are properly maintained and operated, there is little likelihood of violating the 0.01 gr/dscf standard.

The visible emissions from the woodworking equipment as exhausted from fabric filters are limited to 5% opacity by the NSR permit. The company will be required to perform weekly visible emissions observations of each fabric filter to determine the presence of visible emissions. If visible emissions are observed, the company will conduct a six-minute visible emissions evaluation (VEE) using 40 CFR 60, Appendix A, Method 9. If during the six minutes, average opacity readings exceed 5%, the company must take corrective action. If corrective action fails to produce opacity less than 5%, an 18-minute VEE using 40 CFR 60, Appendix A, Method 9 is required to determine compliance. The observer must be Method 9 certified. This will satisfy the periodic monitoring requirement for the visible emission limitation included in the permit.

The weekly visible emissions observations will also satisfy the periodic monitoring requirement for the visible emission limitation. Frequent checks for visible emissions will limit the impacts of malfunctions of the control equipment. As long as the control equipment is operating properly, there is little likelihood of violating the visible emission limitation. The permit requires that the baghouses be equipped with devices for continuous measurement of pressure drop. This will aid in determining if the control devices are operating properly.

The weekly visible emissions observations satisfy the periodic monitoring requirement for the woodworking equipment.

Compliance Assurance Monitoring

The company indicates that CAM does apply to the woodworking emissions controlled by three baghouses. In addition to the abovementioned periodic monitoring requirements, the company will be required to conduct weekly external baghouse inspections, annual internal baghouse inspections, and weekly pressure drop checks. An excursion will be identified when the opacity exceeds 5%. Excursions will be identified in the semi-annual monitoring report. These measures will satisfy the compliance assurance monitoring requirements for the baghouses

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include annual wood processing rates and the results of the weekly baghouse VEEs.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

There are no specific reporting requirements for the woodworking operations.

Streamlined Requirements

The company did not propose any specific streamlining regarding the woodworking operation.

Because some woodworking equipment was installed after 1972, it is subject to new source requirements in 9 VAC 5-50-80, Standard for Visible Emissions, while the remainder of the woodworking equipment is subject to existing source requirements in 9 VAC 5-40-80. The requirements are essentially the same (20% opacity), except that existing sources are limited to one 6-minute period not to exceed 60% opacity, rather than 30% opacity for new sources. However, the NSR permit establishes BACT limits of 5% opacity for fabric filter control of woodworking equipment. Therefore, this more stringent standard applies.

The fugitive dust requirements for existing and new sources are found in separate regulations (9 VAC 5-40-90 and 9 VAC 5-50-90, respectively), which include nearly identical standards. However, the NSR permit limits fugitive emissions to 10% opacity as a BACT requirement. This is more stringent than the requirements of 9 VAC 5-40-90 or 9 VAC 5-50-90. Therefore, these requirements will be streamlined in the Title V permit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

The permit contains references to the administrative requirements outlined in 9 VAC 5 Chapter 20. 9 VAC 5 Chapter 40, Part I identifies general requirements for existing sources. The provisions of 9 VAC 5-40-20 outline compliance demonstrations by existing sources. The company listed this general requirement for existing sources which details how compliance will be determined in the case where stack testing or specific monitoring devices are required.

The Title V permit also contains general conditions from the Minor NSR Permit issued on December 15, 2004 (as amended February 5, 2007 and March 12, 2007). The following limitations are requirements from the NSR permit:

Condition 19 requires that the facility be constructed to allow for emissions testing.

Condition 20 states that the company must allow state and local representatives to enter the premises.

Condition 21 requires notification in the case of excess emissions due to equipment failure or malfunction.

Condition 22 requires the company to reduce operation or shut down when requested in order to avoid a violation of a primary ambient air quality standard.

Condition 23 requires the company to maintain records of maintenance and develop an inventory of spare parts to minimize excess emissions.

Condition 24 states that the Department has the authority to revoke or modify the NSR permit.

Condition 25 requires notification in case of change in ownership.

Condition 26 requires the company to respond to requests for information related to emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement No. 2-2003".
This general condition cites the sections that follow:
9 VAC 5-80-80. Application
9 VAC 5-80-140. Permit Shield
9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

This general condition cites the sections that follow:

9 VAC 5-40-50. Notification, Records and Reporting
9 VAC 5-50-50. Notification, Records and Reporting

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications Located in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follows:
40 CFR 61.145, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation.
40 CFR 61.148, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to insulating materials.
40 CFR 61.150, NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to waste disposal.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

9 VAC 5 Chapter 40, Part II, Article 2 – Emission Standards for Odor – states that the company may not discharge emissions causing objectionable odor. This requirement is not included in the State Implementation Plan and is considered state-only enforceable.

The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all

times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

FUTURE APPLICABLE REQUIREMENTS

The company did not identify any future applicable requirements in the application. No future requirements are anticipated at this time.

INAPPLICABLE REQUIREMENTS

NSPS Subpart Dc - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60.40c - 48c, does not apply to the Bigelow boiler since it was installed prior to 1989.

NSPS Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984, 40 CFR 60.110b – 117b, does not apply to three 4000-gallon storage tanks at the plant. These units are well below the 75 m^3 (19,789 gallons) capacity threshold for applicability of this rule.

40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters, applied to both units. The only requirements were for initial notification, and this requirement was fulfilled. The regulation was subsequently vacated by court order. At the present time, no applicable requirements have been identified through §112(j) of the Clean Air Act.

9 VAC 5 Chapter 60, Part II, Article 4 – Emission Standards for Toxic Pollutants from Existing Sources – requires the company to comply with emission standards for toxic air pollutants. This requirement is not included in the State Implementation Plan, and contains an exclusion in 9 VAC 5-60-200 C.4 for stationary sources in source categories regulated by requirements established under §112 of the Clean Air Act. Because units at the facility are included in source categories subject to MACT standards, state toxics requirements do not apply.

9 VAC 5 Chapter 60, Part II, Article 5 – Emission Standards for Toxic Pollutants from New Sources – requires the company to comply with emission standards for toxic air pollutants. This requirement is not included in the State Implementation Plan, and contains an exclusion in 9

VAC 5-60-300 C.4 for stationary sources in source categories regulated by requirements established under §112 of the Clean Air Act. Because units at the facility are included in source categories subject to MACT standards, state toxics requirements do not apply.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1] (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
BST-1	Lacquer Bulk Storage Tank	9 VAC 5-80-720 B	VOC	----
BST-2	Sealer Bulk Storage Tank	9 VAC 5-80-720 B	VOC	----
BST-3	Thinner Bulk Storage Tank	9 VAC 5-80-720 B	VOC	----

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

Minor modifications to Title V permits are not subject to the public participation requirements of 9 VAC 5-80-270. EPA and the air quality agencies of the affected states (Kentucky, Tennessee, West Virginia, and North Carolina) were notified of the permit application. Copies of the permit request were forwarded to EPA, Region 3. No newspaper advertisement or other forms of notification are required.

No comments were received from EPA or affected states.